The Discharger currently does not accept hauled-in ADM for direct injection into its anaerobic digester for co-digestion. However, if the Discharger proposes to receive hauled-in ADM for injection into its anaerobic digester for co-digestion, this provision requires the Discharger to notify the Central Valley Water Board and develop and implement SOP's for this activity prior to initiation of the hauling. The requirements of the SOP's are discussed in Section VI.C.5.c.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies for flow (continuous), BOD_5 (three times per week), TSS (three times per week), ammonia (weekly), electrical conductivity (quarterly), and phosphorus (monthly) have been retained from Order R5-2013-0094-01.
2. Order R5-2013-0094-01 required continuous influent pH monitoring. The monitoring frequency for pH has been reduced to daily. The Central Valley Water Board finds that this frequency is sufficient to characterize the pH of the influent.

B. Effluent Monitoring

1. Order R5-2013-0094-01 required effluent monitoring at Monitoring Location EFF-001 to determine compliance with effluent limitations at Discharge Points 001, 002, and 003 (the Pond 6 spillway). This order establishes Monitoring Location EFF-002 to differentiate between discharge to Discharge Point 001 and Discharge Point 002. EFF-001 and EFF-002 are located at the same monitoring location, which is considered representative of discharge from the Facility to the Feather River or the disposal ponds, and are referenced as EFF-001/EFF-002. Discharge Point 003 was included in Order R5-2013-0094-01 due to the erosion events at Discharge Point 001, which limited the Discharger's ability to discharge directly to the Feather River. This Order removes monitoring requirements at Discharge Point 003 because no dilution has been granted at the Pond 6 spillway, and discharge at Discharge Point 003 will not be able to meet water quality objectives without dilution.
2. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2), effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.
3. Effluent monitoring frequencies and sample types for discharge location (when switching between discharge points), depth of water over diffuser (daily when discharging at Discharge Point 001), flow (continuous), BOD_5 (three times per week), pH (daily), TSS

(three times per week), copper (monthly), dichlorobromomethane (monthly), mercury (monthly), ammonia (twice per week), chlorine residual (continuous when discharging at Discharge Point 001), dissolved oxygen (three times per week), electrical conductivity (monthly), hardness (monthly), phosphorus (monthly), settleable solids (five times per week when discharging at Discharge Point 001), sodium bisulfite (continuous when discharging at Discharge Point 001), temperature (three times per week), total coliform organisms (three times per week when discharging to Discharge Point 001 and weekly when discharging to Discharge Point 002), and total dissolved solids have been retained from Order R5-2013-0094-01 to determine compliance with effluent limitations, where applicable, and characterize the effluent for these parameters.

4. Order R5-2013-0094-01 required effluent monitoring for nitrate (twice per month), nitrite (twice per month), chlorpyrifos (quarterly), and diazinon (quarterly). The monitoring frequency has been reduced for nitrate (monthly), nitrite (monthly), chlorpyrifos (annually), and diazinon (annually). The Central Valley Water Board finds that this frequency is sufficient to characterize nitrate, nitrite, chlorpyrifos, and diazinon in the effluent. This Order also establishes requirements for the Discharger to calculate and report nitrate plus nitrite to determine compliance with the applicable effluent limitations.

5. Monitoring data collected over the previous permit term for bis (2-ethylhexyl) phthalate, lead, chloride, manganese, and sulfate did not demonstrate reasonable potential to exceed water quality objectives/criteria. Thus, specific monitoring requirements for these parameters have not been retained from Order R5-2013-0094-01.

6. In accordance with section 1.3 of the SIP, periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires effluent monitoring for priority pollutants and other constituents of concern quarterly beginning in the first quarter of the year 2020 at Monitoring Location EFF-001/EFF-002. See section IX.C of the MRP (Attachment E) for more detailed requirements related to performing priority pollutant monitoring.

7. Water Code section 13176, subdivision (a), states: "*The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with Section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code.*" The DDW accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

   Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA. (Wat. Code §§ 13370, subd. (c), 13372, 13377.) Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat. Code § 13372, subd. (a).) The holding time requirements are 15 minutes for chlorine residual, dissolved oxygen, and pH, and immediate analysis is required for temperature. (40 C.F.R. § 136.3(e), Table II) The Discharger maintains an ELAP accredited laboratory on-site and conducts analysis for chlorine residual, dissolved oxygen, and pH within the required 15 minute hold times.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Consistent with Order R5-2013-0094-01, monthly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** Consistent with Order R5-2013-0094-01, quarterly chronic whole effluent toxicity testing is required at Discharge Point 001 in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

The most sensitive species to be used for chronic toxicity testing was determined in accordance with the process outlined in the MRP Section V.E.2. Based on the Discharger's last 3 years of chronic toxicity data, the Discharger has found that chronic toxicity testing for *Ceriodaphnia dubia* is likely affected by pathogen interference. A freeze treated test, which is meant to address the pathogen interference in effluent samples, was conducted on *Ceriodaphnia dubia* on 7 August 2018 and resulted in a percent effect of 2.31 at the in-stream waste concentration of 8.3 percent effluent for reproduction. This is the highest percent effect at 8.3 percent effluent when compared to concurrent chronic toxicity testing of *Selenastrum capricornutum* survival and *Pimephales promelas* survival and growth; therefore, *Ceriodaphnia dubia* has been established as the most sensitive species for chronic WET testing.

D. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

b. Consistent with Order R5-2013-0094-01, this Order requires receiving water monitoring when the Feather River is flowing within its normal channel (approximately 25,000 cfs or less) during the weekly monitoring period Sunday through Saturday when discharging to Discharge Point 001.

c. The receiving water monitoring frequency and sample type for pH (weekly), fecal coliform organisms (quarterly), dissolved oxygen (weekly), electrical conductivity (weekly), hardness (weekly), temperature (weekly), and turbidity (weekly) at Monitoring Locations RSW-001 and RSW-002 have been retained from Order R5-2013-0094-01 to characterize the receiving water for these parameters.

d. Receiving water monitoring requirements at RSW-003, the middle of the Feather River by boat directly across from Boyd's Pump boat ramp, has not been retained from Order R5-2013-0094-01 because receiving water monitoring at RSW-003 is not representative of receiving water effects of the discharge at Discharge Point 001, and discharge to Discharge Point 003 is prohibited.

2. Groundwater

a. Water Code section 13267 states, in part, "*(a) A Regional Water Board, in establishing…waste discharge requirements… may investigate the quality of any waters of the state within its region"* and *"(b) (1) In conducting an investigation…, the Regional Water Board may require that any person who… discharges… waste…that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.*" The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, a Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. The Monitoring and Reporting Program is issued pursuant to Water Code section 13267. The groundwater monitoring and reporting program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this Order.

b. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with the State Anti-Degradation Policy. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified. Until groundwater monitoring is sufficient, this Order contains Groundwater Limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened and specific numeric limitations established consistent with the State Antidegradation Policy and the Basin Plan.

c. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Central Valley Water Board plans and policies, including the State Anti-Degradation Policy. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the pretreatment requirements contained in 40 C.F.R. part 403 and implemented in section VI.C.5.a. of this Order. Biosolids monitoring is required per U.S. EPA guidance to evaluate the effectiveness of the pretreatment program. Biosolids monitoring for compliance with 40 C.F.R. part 503 regulations is not included in this Order since it is a program administered by U.S. EPA's part 503 biosolids program:

https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws

2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of constituents in the wastewater. Consistent with Order R5-2013-0094-01, this Order requires quarterly water supply monitoring for electrical conductivity and total dissolved solids at Monitoring Location SPL-001.

3. Disposal Pond Monitoring

Disposal pond monitoring is required to ensure proper operation of the disposal ponds. Weekly monitoring for freeboard, electrical conductivity, dissolved oxygen, and odors has been retained from Order R5-2013-0094-01.

4. **Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program**

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from their own laboratories or their contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall submit annually the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDR's that will serve as an NPDES permit for City of Yuba City, Wastewater Treatment Facility. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDR's and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following <**Describe Notification Process (e.g., newspaper name and date)**>

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board's website at:

http://www.waterboards.ca.gov/centralvalley/board_info/meetings/

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDR's as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office by 5:00 p.m. on **21 December 2018**.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDR's during its regular Board meeting on the following date and time and at the following location:

Date:	**7/8 February 2019**
Time:	8:30 a.m.
Location:	Regional Water Quality Control Board, Central Valley Region 11020 Sun Center Dr., Suite #200

Rancho Cordova, CA 95670

Interested persons were invited to attend. At the public hearing, the Central Valley Water Board heard testimony pertinent to the discharge, WDR's, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDR's and NPDES permit should contact the Central Valley Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Michelle Snapp at (916) 464-4824.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Ammonia Nitrogen, Total (as N)	mg/L	50	0.26	1.81	2.14[1]	1.81[2]	--	--	--	--	Yes
Bis (2-ethylhexyl) Phthalate	µg/L	1.9	<0.5	1.8	--	--	1.8	5.9	--	4	No[3]
Chloride	mg/L	64[4]	1.83[4]	230	860	230	--	--	--	250	No
Copper, Total Recoverable	µg/L	8.5	2.3	5.3	7.6	5.3	1,300	--	--	1,000	Yes
Dichlorobromomethane	µg/L	1.4	<0.16	0.56	--	--	0.56	46	--	80[5]	Yes
Electrical Conductivity @ 25°C	µmhos/cm	673[4]	108[4]	900	--	--	--	--	--	900	No[3]
Lead, Total Recoverable	µg/L	0.52	0.71	1.4	36	1.4	--	--	--	15	No
Manganese, Total Recoverable	µg/L	29[4]	43[4]	50	--	--	--	--	--	50	No
Mercury, Total Recoverable	ng/L	7.8[6]	1.7[6]	12	--	--	50	51	12[7]	2,000	Yes[3]
Nitrite Nitrogen, Total (as N)	mg/L	1.35	<0.05	1	--	--	--	--	--	1	No[3]
Nitrate Plus Nitrite (as N)	mg/L	4.85	0.0968	10	--	--	--	--	--	10	Yes[3]
Sulfate	mg/L	35[4]	3.01[4]	250	--	--	--	--	--	250	No
Total Dissolved Solids	mg/L	328[4]	55[4]	500	--	--	--	--	--	500	No

General Note: All inorganic concentrations are given as a total recoverable.
MEC = Maximum Effluent Concentration
B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
C = Criterion used for Reasonable Potential Analysis
CMC = Criterion Maximum Concentration (CTR or NTR)
CCC = Criterion Continuous Concentration (CTR or NTR)
Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)
Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)
Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective
MCL = Drinking Water Standards Maximum Contaminant Level
NA = Not Available
ND = Non-detect

Footnotes:
(1) U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour average.
(2) U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day average.
(3) See section IV.C.3 of the Fact Sheet for a discussion of the RPA results.
(4) Represents the maximum observed annual average concentration for comparison with the Secondary MCL.
(5) Represents the Primary MCL for total trihalomethanes, which include bromoform, chlorodibromomethane, chloroform, and dichlorobromomethane.
(6) Represents the maximum observed annual average concentration for comparison with water column concentration corresponding to the Sport Fish Water Quality Objective in the Statewide Mercury Provisions.
(7) Represents the water column concentration corresponding to the Sport Fish Water Quality Objective in the Statewide Mercury Provisions.

ATTACHMENT H – CALCULATION OF WQBEL'S

Human Health WQBEL's Calculations										
Parameter	**Units**	**Criteria**	**Mean Background Concentration**	**CV Eff**	**Dilution Factor**	**MDEL/AMEL Multiplier**	**AMEL Multiplier**	**AMEL**	**MDEL**	**AWEL**
Dichlorobromomethane	µg/L	0.56	<0.16	0.47[1]	221	1.80	1.43	89[2]	160[2]	--
Nitrate Plus Nitrite (as N)	mg/L	10	0.049	1.1[1]	0	2.06[3]	2.07	10	--	21

1 Coefficient of Variation (CV) was established in accordance with section 1.4 of the SIP.

2 Final effluent limitations in the Order are based on Facility performance and retained from Order R5-2013-0094-01.

3 Represents the AWEL/AMEL multiplier.

Aquatic Life WQBEL's Calculations																	
Parameter	**Units**	**Criteria**		**B**	**CV Eff**	**Dilution Factors**		**Aquatic Life Calculations**							**Final Effluent Limitations**		
		CMC	**CCC**			**CMC**	**CCC**	**ECA Multiplier$_{acute}$**	**LTA$_{acute}$**	**ECA Multiplier$_{chronic}$**	**LTA$_{chronic}$**	**AMEL Multiplier$_{95}$**	**AWEL Multiplier**	**MDEL Multiplier$_{99}$**	**AMEL[1]**	**AWEL[2]**	**MDEL[3]**
Ammonia Nitrogen, Total (as N)	mg/L	2.14	1.81	0.26	0.33[4]	11	12	0.50	11	0.87	18	1.3	1.8	2.0	15[5]	21[5]	--
Copper, Total Recoverable	µg/L	7.6	5.3	3.5	0.37	11	12	0.47	25	0.67	18	1.3	1.9	2.1	50[5]	--	85[5]

1 Average Monthly Effluent Limitations are calculated according to Section 1.4 of the SIP using a 95th percentile occurrence probability.

2 Average Weekly Effluent Limitations are calculated according to Section 1.4 of the SIP using a 98th percentile occurrence probability.

3 Maximum Daily Effluent Limitations are calculated according to Section 1.4 of the SIP using a 99th percentile occurrence probability.

4 Coefficient of Variation (CV) was established in accordance with section 1.4 of the SIP.

5 Final effluent limitations in the Order are based on the Discharger's dynamic modeling results.